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Quisnam sexcaudatus?

MARCH, 1902.

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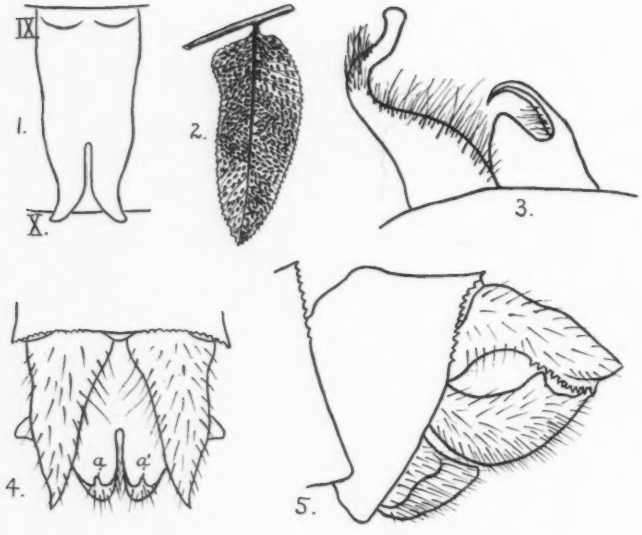

FIG. 1. GOMPHUS VIRIDIFRONS HINE.
FIG. 2. PINNULE OF OSMUNDA REGALIS WITH EGGS OF ARGIA PUTRIDA.
FIGS. 3-5. OPHIOGOMPHUS JOHANNUS NEEDHAM.

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

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CONTENTS:

Williamson—A List of the Dragonflies Observed in Western Pennsylvania 65
Viereck—The Home of some Aculeate Hymenoptera with Descriptions of Two New Species 71
Comstock—A Trip to Lake Josephine, Florida 75
Johnson—On the Validity of Dasyllis Affinis Macquart 77
Robertson—Some New or Little Known Bees 79
Smyth—Identity of Hemaris Tenuis and H. Diffinis 82
Hood—Notes on Certain Coleoptera .. 83
Coquillett—Three New Species of Nematocerous Diptera 84
Banks—A New Species of Brachynemurus 86
Viereck—A New Species of Cratichneumon 87
Editorial 88
Notes and News 88
Entomological Literature 91
Doings of Societies 94

A List of the Dragonflies Observed in Western Pennsylvania.—(Plate III.)

BY E. B WILLIAMSON.

The following list of 68 species is certainly not a complete one for the region considered, but may serve as a basis for further work by other collectors. The unlikelihood that the writer will do any more field work in western Pennsylvania justifies the publication of the following notes. I have given various collectors credit for their records throughout the paper. Mr. J. L. Graf, Mr. D. A. Atkinson and the writer usually collected in company, and nearly all of the records to which no collector is ascribed were established by this collecting party. Mr. H. D. Merrick has done some collecting in Beaver County; Mr. Atkinson collected at Conneaut Lake; the other records come from Alleghany, Westmoreland, Fayette and Somerset counties. Dr. Calvert writes me that *Gomphus albistylus* has been taken at Lehigh Gap. With the exception of this record and the record of *Pantala flavescens* I have examined the specimens in every case. The first male of *Gomphus parvulus* taken by Mr. Graf was identified by Dr. Calvert, who has also helped with the determination of *Gomphus brevis*.

LOCALITIES MENTIONED.

Aspinwall, a suburb of Allegheny City, on the Alleghany River.

Chartiers Creek, a tributary of the Ohio, Alleghany County.

Confluence, Somerset County; the Yough, Castleman and Laurel Hill Creek join here to form the Youghiogheny River.

Idlewild, Westmoreland County, on the Loyalhannah Creek.

New Brighton, Beaver County.

Ohio Pyle, Fayette County, on the Youghiogheny River.

Pine Creek, a tributary of the Allegheny River in Alleghany County.

Rockwood, Somerset County on the Castleman River.

Schenley Park, Pittsburg.

Silver Lake, a pond within the city limits of Pittsburg.

Squaw Run, a tributary of the Allegheny River in Alleghany County.

Turtle Swamp, along the Ohio River near Pittsburg, almost filled at the present time.

1. **Calopteryx maculata** Beauvois.

Alleghany County, June and July (C. Daggette, A. S. Brent, J. L. Graf, R. F. Foerster, and D. A. Atkinson); Chartiers Creek, May 28, 1899; Squaw Run, August 28, 1898; New Brighton, May 28, 1899 (H. D. Merrick); Couneaut Lake, August 6, 1899 (D. A. Atkinson); Idlewild, May 30, 1899, and July 10, 1900 (D. A. Atkinson); Ohio Pyle, June 18, 1899, and June 25, 1900; Rockwood, June 29, 1900; Confluence, June 30, 1900. A widespread species but less common in Fayette and Somerset counties, at least along the streams, than the next.

2. **Calopteryx angustipennis** Selys.

Ohio Pyle, June 18 and July 2, 1899, and June 24–July 1, 1900; Confluence, June 30, 1900; Rockwood, June 29, 1900. A female of this species was taken feeding on a teneral male of *Enallagma exsulans*. On two occasions males were seen to seize females by the prothorax. Each male after alighting and resting for a few seconds, still holding the female, then proceeded to fill the seminal vesicle, an operation requiring ten or

fifteen seconds. In the case also of *Calopteryx maculata*, *Argia putrida*, and *Enallagma exsulans* about the same time was required for the transfer of sperm.

3. **Hetærina americana** Fabricius.

Alleghany County, July (J. L. Graf and D. A. Atkinson); Conneaut Lake, August 6, 1899 (D. A. Atkinson); Alleghany County, August 8 and September 12, 1898; Ohio Pyle, June 28, 1900.

4. **Lestes unguiculatus** Hagen.

Alleghany County, July, 1899 (D. A. Atkinson): Turtle Swamp, July 31 and Aug. 21, 1898; Conneaut Lake, August 6, 1899 (D. A. Atkinson).

5. **Lestes forcipatus** Rambur.

Turtle Swamp, June 3, 1899; Boston, Alleghany County, May 7, 1899; Pine Creek, May 21, 1899.

6. **Lestes rectangularis** Say.

Alleghany County, July (R. F. Foerster and D. A. Atkinson); Turtle Swamp, July 31, 1898, and June 3, 1899; Idlewild, July 10, 1900 (D. A. Atkinson).

7. **Argia putrida** Hagen.

Beaver County, May 25, 1899; Conneaut Lake, August 6, 1899 (D. A. Atkinson); Idlewild, July 10, 1900 (D. A. Atkinson); Alleghany County, August 28, 1898, and July, 1899; Chartiers Creek, May 28, 1899; Ohio Pyle, June 18, 1899, and June 24, July 1, 1900; Confluence, June 30, 1900. A male of this species was taken at Ohio Pyle in the act of devouring a large Mayfly. Males were seen on several occasions in the act of filling the seminal vesicle. They do this immediately after seizing the females. As has often been observed pairs will congregate about the same spot for the females to oviposit. On a frond of the royal fern, *Osmunda regalis*, which trailed in the waters of the Youghiogheny River at Ohio Pyle, fourteen couples were counted at one time. The pinnules of the fern were found to be literally packed with the eggs (Pl. III, fig. 2). The males are often drawn beneath the

water, apparently against their wills, by the females. Frequently a male will release himself from the prothorax of the female, and numbers of such males may be resting motionless above the water's surface on the very vegetation in which the females are ovipositing beneath the surface.

8. **Argia violacea** Hagen.

Alleghany County, July, 1899 (D. A. Atkinson); Conneaut Lake, August 6, 1899 (D. A. Atkinson); Ohio Pyle, June 28, 1900; Idlewild, July 7, 1900 (D. A. Atkinson).

9. **Argia apicalis** Say.

Ohio River, Alleghany County, August 21, 1898; Monongohela River, Alleghany County, July 30, 1898; Allegheny River, Alleghany County, September 18, 1898.

10. **Erythromma conditum** Hagen.

Idlewild, May 30, 1899; Pine Creek, May 21 and June 4, 1900. Taken especially along low sedgy streams, usually among trees or underbrush.

11. **Nehalennia irene** Hagen.

Alleghany County, July, 1899 (D. A. Atkinson).

12. **Nehalennia posita** Hagen.

Pine Creek, June 4, 1899; Alleghany County, July, 1899 (D. A. Atkinson); Conneaut Lake, August 6, 1899 (D. A. Atkinson).

13. **Amphiagrion saucium** Burmeister.

Alleghany County, July (A. S. Brent and D. A. Atkinson); Turtle Swamp, June 3, 1899; Pine Creek, May 21 and June 4, 1899; Idlewild, July 10, 1900 (D. A. Atkinson).

14. **Enallagma Hageni** Walsh.

Idlewild, July 10, 1900 (D. A. Atkinson). At Idlewild there are a number of ponds along the railroad track near the Loyalhannah. Probably this species was taken about these ponds and not along the creek.

15. **Enallagma civile** Hagen.

Alleghany County, July (J. L. Graf and D. A. Atkinson);

Silver Lake, August 8 and 27, 1898; Schenley Park, August 26 and 31 and September 6, 1898; Allegheny River, Alleghany County, August 9 and September 12, 1898; Turtle Swamp, August 21, 1898; Chartiers Creek, May 28, 1899; Pine Creek, June 4, 1899; Conneaut Lake, August 6, 1899 (D. A. Atkinson); Idlewild, July 10, 1900 (D. A. Atkinson).

16. **Enallagma carunculatum** Morse.

Schenley Park, August 29, 1898.

17. **Enallagma aspersum** Hagen.

Conneaut Lake, August 6, 1899 (D. A. Atkinson).

18. **Enallagma geminatum** Kellicott.

Chartiers Creek, May 28, 1899; Conneaut Lake, August 6, 1899 (D. A. Atkinson).

19. **Enallagma exsulans** Hagen.

Beaver County, May 25, 1899; Alleghany County (C. Daggette); Monongohela River, Alleghany County, July 30, 1898; Silver Lake, August 14, 1898; Aspinwall, September 12, 1898; Chartiers Creek, May 28, 1899; Ohio Pyle, June 18, 1899, and June 24–July 1, 1900; Idlewild, July 10, 1900 (D. A. Atkinson. A pair of this species was observed of which, after many ineffectual attempts at copulation, the male dropped the female, who lay as though dead for some minutes before flying away, the male meanwhile clinging motionless to a grass stem.

20. **Enallagma antennatum** Say.

Silver Lake, August 27, 1898; Chartiers Creek, May 28, 1899.

21. **Enallagma signatum** Hagen.

Conneaut Lake, August 6, 1899 (D. A. Atkinson).

22. **Enallagma pollutum** Hagen.

Conneaut Lake, August 6, 1899 (D. A. Atkinson).

23. **Ischnura verticalis** Say.

Schenley Park, July 30, 1898, and May 1, 1899; Monongohela River, Alleghany County, July 30, 1898: Turtle Swamp, July 31 and August 21, 1898, and May 3 and June 3, 1899;

Allegheny River, Alleghany County, August 9 and September 12, 1898; Silver Lake, August 18 and 27, 1898; Alleghany County, May, June and July (J. L. Graf and D. A. Atkinson); Beaver county, May 25, 1899; Idlewild, May 30, 1899, and July 10, 1900 (D. A. Atkinson); Conneaut Lake, August 6, 1899 (D. A. Atkinson); Ohio Pyle, June 18, 1899.

24. **Anomalagrion hastatum** Say.

Turtle Swamp, July 31, 1898, and May 3, 1899; Schenley Park, September 2, 1898; Pine Creek, May 21, 1899; Alleghany County, July, 1899 (D. A. Atkinson); Idlewild, May 30, 1899; Conneaut Lake, August 6, 1899 (D. A. Atkinson).

25. **Ophiogomphus rupinsulensis** Walsh.

Ohio River, Alleghany County, May 14, 1899. A single teneral male.

26. **Ophiogomphus johannus** Needham.

Rockwood, June 29, 1900; one male. The specimen was referred to Professor Needham, who has identified it as his species *johannus*. It is clearly distinct from *Ophiogomphus carolinus* Hagen, as figured by Needham (Can. Ent. xxxi, 9), by the form of the superior abdominal appendages seen from above, but seemed to differ from *johannus* in the form of the inferior appendage and slightly in the genital hamules. (See Plate III, figs. 3–5). Moreover, the humeral and antehumeral stripes are separated and not largely joined as described for *johannus*. Professor Needham writes that since the species was described he has examined a number of both sexes, and that the distinctness of the humeral and antehumeral stripes is a variable character, though the Pennsylvania specimen has them more widely separated than any other specimen he has seen. Moreover, the form of the inferior abdominal appendage has not been accurately described and figured, as the original material was a single teneral male with this part badly shrunken. The inferior appendages in *O. johannus* and *O carolinus* are very similar. Professor Needham says also that the accessory genital organs of the second abdominal

segment vary in the same species to an unusual degree in this genus.

The Pennsylvania specimen was taken along the Castleman River, near a very swift ripple about a mile above Rockwood. It was resting on a large boulder at the water's edge. As I approached it flew away. Half an hour later, when I again visited the spot, it (presumably the same one) was resting on the identical rock where I had seen it before. It was the only one of the species observed. The ground color of the thorax was a beautiful dark grass green. About the ripple where it was found, *Gomphus brevis* and *G. albistylus* were common.

(To be Continued.)

The Home of Some Aculeate Hymenoptera with Descriptions of Two New Species.

By H. L. Viereck.

For the entomologist there can hardly be a more enticing field to collect in than the wilds of southern New Jersey. The place is a favorite among the nearby collectors, the abundant and peculiar fauna is enough to draw Pennsylvanians from their native heath and make them forget that there are insects in their own State. It is only necesary to go eight or twelve miles from Philadelphia to find excellent places to work in with the net. This part of the State abounds in barren areas which afford no temptation to the grasping agriculturalist, and have consequently lapsed into grand reserves, blessed with an absence of fences and trespass signs, a delight for the free. The flora is rich, as varied and peculiar as the insect world, which in great part it supplies. Here we find endless variety of land, woods, bogs, wastes, clearings, each of which affords some specialties in the entomological line. Sand clearings with a few scattered plants, here and there a short pine tree, form the asylums of Fossorial Hymenoptera and yield fine things to the one who hunts.

Near to the Delaware and Big Timber Creek, here a county boundry, in the corner of Gloucester County, is such a sandy

place as has been described ; here was found the type of *Miscophus americanus* Fox, by the describer himself, on September 9, 1890. In a somewhat similar place, no more than two miles farther east, and near North Woodbury in the same county, were collected some interesting aculeate species, two of which proved to be new. Here *Miscophus americanus* makes its home. This species still remains the only representative of the genus in America—it has not been recorded from any other State. Three trips were made to this locality, June 13, 22 and August 1, 1901. In this sandy area bounded by woods, roads, waste field and feeble run, were noticed numerous aculeates, so many indeed as to require constant vigilance to detect and capture them as they emerged from or arrived at their nests. The days were bright and sunny, the heat almost uncomfortable as the rays were reflected from the hot surface of the sand. *Miscophus americanus* was not taken in departing or returning to the nest, but sometimes on a dead twig or sporting on the sand. Tachina flies were noticed evidently waiting their chance to lay an egg in one of the tunnels.

Plenoculus in New Jersey. This genus had never been recorded any further east than Agricultural College, Michigan, type locality of *P. davisii* the type of the genus, but here in New Jersey were two species, evidently new to science. They have been named *P. atlanticus* and *P. foxii ;* both were captured while resting on the sand. *Atlanticus* was at first thought to be identical with *davisii*, but closer study convinces one that it is distinct; its identity will no doubt be more firmly established when the female is found. *P. foxii* is a handsome neat species, both sexes of it being taken. The Mutillidæ were also well represented here, males and females in three genera were about. *Methoca bicolor* were running on the sand with *M. stygia* hovering over them ; though not noticed in coitu, they must be sexes of one species, and *M. stygia* will hold as the name, as its description comes before *bicolor ; Myrmosa unicolor* Say and *M. thoracica* Blake were found the same way, and with Mr. Ashmead I believe them to be sexes of one species. *Sphærophthalma canella* Blake was here hovering over the sand above *S. rugulosa* Fox ; here again it is believed we have to deal with

sexes of one species—*canella*. There is no good reason why it should not be so. The following are the descriptions of the new species.

Plenocolus foxii, n sp.*

Clypeus produced, like a blunt beak, dorsulum closely punctured especially medially, enclosure of metanotum longitudinally striate, pygidium almost impunctate.

♀.—Length 5 mm. Clypeus longitudinally raised medially with a triangular smooth to polished area, from the apex of which there extends back on the front, terminating before its middle a longitudinal sort of carina. Front convex, very finely punctate or rugulose. Space between posterior ocelli distinctly greater than that between them and nearest eye margin, cheeks indistinctly sculptured, dullish, finely silvery sericeous, the raised portion of the front (which extends down to a point meeting the supraclypeal carina) indistinctly sericeous, almost bare, the depression on each side of the raised space satiny, the clypeus less so. First flagellar joint longer than the second, but not as long as the second and third joints united. Pronotum very finely sculptured. Dorsulum slightly impressed medially where it is closely finely punctured, there is a slight indication of a line to each side of this median impression, beyond which the dorsulum is provided with separated and more distinct punctures and also a faint impression. Mesapleuræ with a longitudinal impressed line, the sculpture obscured by a silvery appressed very short pubescence. Scutellum uniformly finely sculptured. Disc of metathorax finely rugulose, with separated imperfectly formed longitudinal striæ. The sides of the metathorax finely indistinctly striate, silvery sericeous. Dorsally the thorax is no more pubescent than the front. Second recurrent nervure received by the second submarginal cell a little beyond the middle. Abdomen subopaque, finely indistinctly sculptured, the segments with a transverse apical impression, partly sericeous, more conspicuous and silvery on the sides. Pygidial area shining.

Black; mandibles whitish on basal half, ferruginous to brown on apical half. A line on pronotum with a broad interruption medially, the tubercles and tegulæ partly, postscutellum, the four anterior femora apically and all the tibiæ above primrose yellow, the tibiæ beneath and the tarsi entirely, brown or brownish.

♂.—Length 4 mm. Differs from the female in having the clypeus produced into a truncate production with a median tooth, and in the indistinctly finely sculptured sides of the metathorax. In color it differs by the markings being more lemon yellow, the tarsi in part unicolorous with the markings. The tibiæ pale brown beneath, and the flagellum with a brown space taking in about all of joints three, four and five.

* Dedicated to William J. Fox, author of this interesting genus.

Type coll. H. L. Viereck. Co-type coll. Acad. Nat. Sci., Philadelphia. Type, locality North Woodbury, Gloucester Co., N. J., June 22 and August 1, 1901 (H. L. V.). Two females, one male. This species is maculated like *P. albipes* Ashm., but is evidently distinct from that species.

Pienoculus atlanticus, n. sp.

Clypeus narrow, broadly truncate with a blunt corner, front with a longitudinal line running from the fore ocellus. Dorsulum uniformly sculptured, metanotum transversely striate. Apical dorsal segment with with a few indistinct punctures.

♂.—Length 4.5 mm. Clypeus with the truncation as broad as its length. shining and sparsely punctured. Front slightly convex, not distinctly impressed laterally, very minutely and uniformly sculptured, opaque, a shining impressed line running from the anterior ocellus down on the face to near the insertion of antennæ, cheeks more shining almost similarly sculptured. No part of the head thickly sericeous, the pubescence heaviest on face; excepting on cheeks, where it is silvery, the pubesence is golden. First joint of the flagellum about as long as the second, mandibles internally with a distinct tooth near the middle. Dorsulum finely uniformly sculptured with two parallel shining lines medially, not extending to the middle. A line starting before the middle laterally extending almost to the posterior border, mesopleuræ with a curved impressed line anteriorly, microscopically, uniformly sculptured. Metanotum longitudinally impressed medially, with tranaverse fine striæ, some of which originate on the anterior border and radiate off to the sides, the small triangular polished impression on the superior half of the metathoracic truncation distinct, the base of the truncation and the metapleuræ sculptured much like mesopleuræ. Second recurrent nervure received by the second submarginal cell distinctly beyond the middle. Abdomen dull, apical segments becoming shining, the apical segment with sparse ill defined punctures.

Black; clypeus ochre yellow, mandibles, exceping brown apices, lemon yellow, part of scape, anterior femora beneath, the apices of all the femora and all tibiæ and tarsi more or less tawny ochraceous.

Type coll. H. L. Viereck. Co-type coll. Acad. Nat. Sci., Phila.

Type, locality North Woodbury, Gloucester Co., N. J., June 13, 1901 (H. L. V.). In the co-type the striæ of metanotum are almost entirely missing. This species is closely related to *P. davisii* Fox, from which it can be distinguished by the clypeus, the finer sculpture, and quite readily by the coloration.

A Trip to Lake Josephine, Fla.

By John and Hurd Comstock, Evanston, Ill.

We were tired of the collecting around Avon Park, not because there were no insects to be found but for the reason that we had become familiar with the country. The scenery on the sand hills is not as tropical as one coming from the North might wish. Having heard of a picturesque "flatwoods" lake some twenty miles south we decided to take a camping trip to this place.

So after securing our outfit, which consisted of a mule and wagon, blankets, guns, a frying pan and provisions for four days, also the ever necessary compass and map, my brother Hurd and I started southward.

The way led through country in which no sign of human existence would be met for miles except the dimmest and roughest of roads. The sun beat down on the sandlike soil, causing the heat to radiate from it in waves. We found pleasure in keeping as quiet as possible, and so did the mule which caused me some exercise. All morning we travelled through a barren waste, overrun with scrub oak and saw palmetto, and without once seeing a man or dwelling of any kind. At noon we entered a stretch of saw-grass prairie where we kept the road with difficulty. After passing this open land the aspect of the country changed. The pines became larger and dwarf oaks vanished. In low places cabbage palms reared their lofty heads, and along waterways cypress were in abundance. The magnolia bay, food plant of *Papilio palamedes* was commonly met with. Soon we came to a cattle pen where we ate lunch and fed our animal. A log hut stood at one end of the pen and an old woman, who seemed to be the sole occupant, told us the way to Lake Josephine. She was a typical South Florida 'cracker,' dirty and snuff besmeared, but hospitable to a degree, as is the case with most of these solitary people. I left her in a state of wonderment by the information that we had come to hunt butterflies. I can imagine her remarking in the peculiar Southern drawl, "them there Yankees shure are purty big fools," and strengthening the opinion with a liberal portion of snuff. This, of course, after we had left.

Late in the day we came in view of the lake, and what a beautiful sight met our eyes. The blazing tropical sun was just sinking in the west, silhouetting the grand palms and live oaks and doubling itself in the still waters of the lake. On a half submerged log sat a water turkey, who did not move when we approached. He seemed conscious of a truce, for it was the hour of peace and quietude, when mother nature's children cease their killing and prepare for another night.

A solitary hut stood near one end of the lake, and toward this we directed our steps. After being welcomed by the usual crowd of barking dogs and staring children, we received permission from the owner to camp a short distance from his cabin. Our evening meal disposed of by the light of a camp fire, we rolled ourselves in blankets and were soon fast asleep. No covering was needed to guard against mosquitoes as, strange to say, there were few of these pests. Whether it was too early in the year for them or not I do not know, but I presume this was the reason. The nights are quite cool in the beginning of May. Next morning we awoke with the birds, in time to see the glorious sunrise, and also to catch a nice string of fish. After a hearty meal we started out in search of Rhopalocera. Then began the finest collecting day of our Florida trip. Butterflies fairly swarmed. The most numerous was *Thecla favonius*, which we took plentifully all around the lake. *Neonympha phocion* hovered over every swamp, and *sosybius* was plentiful in the woods. *Anosia berenice*, *Papilio ajax*, *Meganostoma cæsonia* and many others were abundant. In a hummock at the north end of the lake we took *Chlorippe flora* and one *alicia*. All the very common species, such as *Junonia cænia*, *Papilio philenor* and *Dione vanillæ*, were as plentiful as at Avon Park. Only one thing marred our happiness. We could not get enough paper with which to put the specimens up in shape for transportation. Our 'cracker' friend could not read, consequently he had no use for paper, and we had thoughtlessly neglected to bring a supply with us. Partly on this account and partly because we only stayed two days we did not secure a very large supply.

Fishing was excellent. Catfish fairly longed to be out of the

water, and bass were quite plentiful. We had the good fortune to see a large 'gator' on the second day of our stay. The woods were full of small game, such as squirrel, rabbit and quail. The latter, however, we could not shoot as it was out of season.

The time of departure came all too soon. On the morning of the fourth day we pulled up stakes and turned our faces towards Avon Park. We both agreed that should we ever again visit Florida more time would be spent at Lake Josephine.

Those who wish to find this lake must take a large scale map of DeSoto County and look for Lake Kuhlman. Josephine is the name by which it is known to those who live near it, and should you ask the way to Kuhlman most of them could not tell you.

Fifty-four species of Rhopalocera were taken at Avon Park unless otherwise stated. The following were the most interesting captures:

Phyciodes phaon.—Fairly plentiful in May.
Timetes petreus.—One only, May.
Limenitis floridensis.—Four, April and May.
Chloripe alicia.—One, Lake Josephine.
Chloripe flora.—Lake Josephnie.
Neonympha phocion.—Very common over marshes in April and May, both at Avon Park and Lake Josephine.
Calephelis cænius.—Not very common.
Thecla M. album.—More often met with than the preceding species.
Terias elathea.—One in February.
Terias jucunda.—Quite common in May.
Terias delia.—Fairly common in February only.
Papilio palamedes.—Quite common from February 20th to March 25th. Taken occasionally after that time.
Pamphila palatka.
Megathymus yuccæ.

On the Validity of Dasyllis Affinis Macquart.

By Chas. W. Johnson.

In the catalogue of described Diptera of North America (2nd Edition), page 233, note 114, Baron Osten Sacken says: "*Laphria affinis* Macq., the type of which I saw in Mr. Bigot's collection, looks very much like *L. thoracica* in the variety with

altogether black abdominal pile. The description speaks of *white* hairs about the head which do not exist in *L. thoracica*, but does not shake my belief in the synonymy."

For some time I have had in my collection two specimens, one (♂) collected at Jackson, Alabama, Oct. 23, '94 ; the other, (♀) from Dr. G. de N. Hough, was collected by Mr. G. R. Pilate at Tifton, Georgia, Oct. 10, '98. Last year (Oct. 21, '01) Mr. E. Daecke obtained a male of the same species at Manumuskin, N. J., and on Oct. 20th I was fortunate enough to capture a female at Riverton, N. J. The above measure respectively 20, 14, 20 and 19 mm. Macquart's description was based on a male, and the two specimens before me agree with it in all of the more important features : palpi black with black pile, beard white, pile on the sides of the face white, mystax black with some intermingling white hairs, pile on the front black and on the sides of the head white ; abdomen narrow, with black pile ; femora and tibia with yellow hair which, on the under side of the posterior legs, is black, In the females there seems to be considerable variation, the pile on the face (including the mystax), the beard and inferior orbits is entirely black, while the specimen from Riverton has only a small upper portion of the orbits slightly white pilose.

In general appearance it more closely resembles *D. flavicollis* than *D. thoracica*. From the former it is readily separated by its black mystax, the pile on the thorax is noticeably thinner and entirely erect, the shining, glaucous ground color showing clearly. From *thoracica* it differs in being much narrower, the head proportionately larger and nearly as wide as the thorax ; the hair on the front and vertex black, and the pile on the thorax shorter, more sparse and of a dull, not a bright yellow.

This seems to be an autumnal species. Of the other four species found in this section I have no records of capture later than the middle of July.

A HERMAPHRODITE LYCÆNA.—On July 14th, 1901, I was fortunate enough to capture, at Fortune's Rock, near Biddeford, Me., a specimen of *Lycæna pseudargiolus*, summer form *neglecta*, whose wings on right side are typical male, while those on the left are heavily bordered with black, equally typical of the female sex.—A. F. WINN, Westmount, Que.

Some New or Little Known Bees.

By Charles Robertson, Carlinville, Illinois.

Osmia cobaltina Cr.

Osmia cobaltina Cresson, Trans. Am. Ent. Soc. VII. 104, ♀, 1878.
Osmia Illinoensis Robertson, Trans. Acad. Sci. St. Louis vii, 347, ♂, 1897.

Osmia atriventris Cr.

Osmia atriventris Cresson, Proc. Ent. Soc. Phil. iii, 29, ♀, 1864.
Osmia proxima, Cresson, ibid. 32, ♂.

Osmia major sp nov.

♀.—Closely resembles the female of the preceding, but is much larger: the mandibles at apex relatively broader, the middle tooth much nearer the outer than inner tooth, while in *O. atriventris* the middle tooth is about half way between the two; segment 6 of abdomen more pubescent, more finely punctured. Length 11 mm.

♂.—Also closely resembles the male of *O. atriventris*, but is larger, the second ventral segment more finely punctured, its apical margin rather densely pubescent. Length 10 mm.

Carlinville, Illinois; 2 ♀, 1 ♂ specimen.

Osmia cordata sp. nov.

♂.—Resembles the male of *O. major* in size, general form, color and pubescence; antennæ long, black, joint 3 hardly longer than 2, much shorter than 4; wings hyaline, basal nervure interstitial with median; notch on segment 6 of abdomen very wide and shallow; 7 strongly bidentate, as usual; ventral segment 1 coarsely punctured, emarginate so that it appears cordate. Length 10–11 mm.

Carlinville, Illinois; 2 ♂ specimens. This may be the male of *O. brevis*.

Osmia pumila Cr.

Osmia pumila Cresson, Proc. Ent. Soc. Phil. iii, 35, ♀, 1864.
Osmia vicina Cresson, ibid. 38, ♂.

Illinois specimens of the ♀ were identified by Mr. Cresson as *O. albiventris*, and I have suspected that the sexes described under that name did not belong together. Through the kindness of Mr. Cresson I have had an opportunity to examine the type. It is hard to distinguish the females of the two species. The female of *O. pumila* is usually smaller, the last joint of antennæ about as long as 4–6 together, enclosure of metathorax more metallic, less triangular, above with a transverse rugose

band, anterior margin of clypeus more regularly truncate, segment 5 of abdomen more densly punctured, hind tibiæ more coarsely punctured. In *O. albiventris* ♀ the anterior margin of clypeus presents two lateral teeth and a median emargination, so that it appears somewhat quadridentate, the last joint of antennæ relatively shorter, the enclosure of metathorax more blackish, more uniformly finely rugose, without the superior transverse series of rugosities. Of the four female types examined one belongs to *O. pumila*.

Nomada bella Cr.

Nomada bella Cresson, Proc. Ent. Soc. Phil. ii, 287, ♂, 1863.
Nomada maculata Cresson, ibid. 303, ♀.
Nomada maculata Robertson, Trans. Am. Ent. Soc. xx, 275, ♀♂, 1893.

I have examined all except one of the type specimens. The mandibles are bidentate. In the original description of *N. maculata* were included some doubtful males and some apparently doubtful varieties.

Nomada simplex sp. nov.

Nomada bella Robertson (not Cresson), Trans. Acad. Sci. St. Louis vii, 340, ♀, 1897.

♂.—Black, apical segment of abdomen ferruginous; head and thorax densely punctured, clothed with long and rather dense pubescence; joints of flagellum slightly denticulate at apex beneath; scutellum hardly subbilobed, unusually low; apical segment bifid; mandibles, clypeus, labrum, inferior orbits in front, scape in front, tubercles, and fasciæ on abdominal segments 1–6, lemon-yellow; the fasciæ more or less narrowed or notched medially in front, sometimes interrupted, behind with an indentation on each side, which on segment 5 sometimes passes through the fascia, leaving a spot on each extreme side; tegulæ lemon-yellow or yellowish ferruginous; flagellum beneath reddish testaceous; anterior and middle legs yellow, the femora and tibiæ largely black behind; hind legs dark, except knees, apex of tibiæ and apical joints of tarsi; wings hyaline, apical margins clouded, nervures and stigma testaceous. Length 8–9 mm.

Epeolus lectus Cr.

Epeolus lectus Cresson, Trans. Am. Ent. Soc. vii, 88, ♀, 1878.
Epeolus agnatus Cresson, ibid. 89, ♂.

I have examined the types. The spurs of the ♀ are not black. The structure of the abdomen is quite different from

E. lectoides, being strongly punctured, segments 2–4 with the apical margins replexed. The pubescent fasciæ are quite continuous, not interrupted as in *E. lectoides*.

Epeolus autumnalis sp. nov.

♀.—Maxillary palpi two-jointed, with only one evident free joint; head and thorax densely confluently punctured, the lower part of pleura with some shining impunctate intervals; scutellum unusually flat and transverse, lateral spines large, not equaling the posterior margin of scutellum; black, middle of mandibles rufous; tubercles, more or less, tegulæ, tibiæ and tarsi, including tibial spurs, ferruginous; femora and trochanters, especially of hind legs, more or less blackish; middle of face, collar, border of mesonotum and two lines on anterior middle, border of tubercles, posterior margin of scutellum, postscutellum, sides of metathorax, base of abdomen and apical margins of segments 1–4 with yellowish cinereous appressed pubescence, the fasciæ more or less notched or interrupted; segment 5 has a large patch on each side, the extreme apex showing a lunate patch of silvery pubescence; wings subfuscous, the apical margins darker, the nervures and stigma fuscous. Length 10 mm.

♂.—More pubescent, especially the face and pleura, segments 1–6 of abdomen with apical fasciæ, wings more hyaline. Length 7–9 mm.

Carlinville, Illinois; 5 ♀, 6 ♂ specimens.

E. pusillus closely resembles this species, but is smaller; lateral spines equaling scutellum; tibial spurs black; pubescence of segment 5 of abdomen, before the silvery lunule, transverse, nor forming two lateral spots; trochanters and and femora more red.

Triepeolus minimus sp. nov.

♀.—Closely resembles the female of the preceding, but is smaller; the maxillary palpi three jointed, with two evident free joints; scutellum more elevated, more bilobed, lateral spines shorter, less flat; face and pleura more densely pubescent, fascia on segment 2 of abdomen with a lateral subquadrate patch extending forwards black; the labrum and three basal joints of antennæ partly ferruginous; legs red, hind trochanters and femora more ferruginous, the front ones more black; wings hyaline, apical margins clouded. Length 8 mm.

Carlinville, Illinois; 1 ♀ specimen.

Dr. W. J. Holland, Director of the Carnegie Institute and author of the Butterfly Book, is actively engaged in the preparation of a work on the Moths, to be profusely illustrated by the three-color process.

Identity of Hemaris Tenuis and H. Diffinis.

By ELLISON A. SMYTH, JR., Blacksburg, Va.

I received additional confirmation this spring, that *Hemaris tenuis* and *H. diffinis* were seasonal forms of one species, and that the effect of winter upon either form in the pupa state, is to produce *H. tenuis*.

Tenuis is the spring form, and *diffinis* the late summer form from eggs of either form.

In my article of the same caption as this, which appeared in the ENTOMOLOGICAL NEWS for November, 1900, on page 585, I spoke of obtaining eggs from a captive female *tenuis* on June 1, 1900, from which about thirty *diffinis* emerged by July 20th. I ended the paragraph as follows: "The balance of these pupæ at this writing (Sept. 13th) seem inclined to winter. Whether they will emerge in the spring as *H. tenuis* or *H. diffinis* remains to be seen."

I carefully kept to themselves these pupæ of *tenuis* parentage, the bulk of which had emerged as *diffinis*, and on May 25, 1901, they commenced to emerge. Eighteen imagines appeared: Of these, thirteen are small typical, light yellow, even margined *H. tenuis;* two are buff yellow like *diffinis*, with, however, very slight emargination; three have slight but distinct emargination and are white yellow like *tenuis*. All were, of course, smoky when they emerged, and those killed at once retain the cloudy areas.

Thus, early summer eggs from *H. tenuis* produced *H. diffinis* later the same summer and pupæ from the same brood, lasting over the winter produced *H. tenuis*, the parent form, the following spring.

I have already abundantly shown that eggs of *H. diffinis*, hibernating as pupæ, produce *H. tenuis* the following spring. The question of identity needs no further proof, though it will be interesting to try the effect of artifficial cold on pupæ from *tenuis* eggs, which normally produce *diffinis*, to see if *tenuis* will result. This I have not done yet.

The above specimens and the others illustrating my breeding experiments are all in my collection carefully labelled.

Notes on Certain Coleoptera.

By L. E. Hood.

At the request of an entomological friend, and armed with a sketch map of the Harvard College grounds giving the localities of certain trees that, in the years ago, were sadly infested with *Chrysomela scalaris* Lec. in all its stages, I made repeated visits to Cambridge this season, hoping to secure living larvæ and imagos for scientific study.

I searched carefully both on the college grounds and in the vicinity without success. Not a single specimen was to be seen, and seeing the futility of further search in this locality, I next went to the Old Roxbury Cemetary in Roxbury, Mass., where I have seen both the larvæ and imagos of this Chrysomelid so numerous that they were absolutely a nuisance. Here I only secured a single adult, no signs of larvæ being visible.

Other localities in Medford, Malden and Braintree, were visited without success.

I only know of a single larva, that a local collector found in Roxbury, having been seen this season in this neighborhood, and I can only understand this remarkable scarcity of a species usually so common, but as being the result of our cold wet spring.

All species of Coleoptera, with a few exceptions, have been scarce this year, and in general the season is a failure as far as collecting goes.

Among other leaf-feeding beetles the same scarcity was observable, the only locality where I have met with any real success in beating was in a swampy field near Braintree, Mass., where I collected the first week in July.

In Mordellidæ only two species were at all common, and these not in the same proportion as in recent years.

All species of *Rhynchophora* were rare, only half a dozen species having been collected during the year, one of these, *Eurymycter fasciata* Oliv., I find high up on trees among fungus.

In Cerambycidiæ I have secured but few individuals, and the spring catch of Carabidæ was a total failure.

The only species of *Cincindela* at all common was *C. sexgut-*

ta. *C. hentzii* was certainly three weeks behind the usual time of appearance, and specimens have been scarce and shy.

While the rule has been a great dearth of both species and specimens, the exception has given a few splendid series of species generally considered very scarce in this region, the most notable being in the Buprestidæ and certain genera of the Chrysomelidæ. During the summer I was presented with a fine little weevil that was found alive in a cargo of fruit from the West Indies.

Three New Species of Nemoatcerous Diptera.

By D. W. COQUILLETT.

The early stages of the following new species of Diptera are to be treated of by Dr. H. G. Dyar, at whose request the writer hereby names and characterizes these species in order that they may be recognized in the future. So little is known in regard to the early stages of our Diptera that any facts on this subject will form a welcome addition to our scanty knowledge, and it is fortunate for the science that so experienced a biologist as Dr. Dyar is to devote a portion of his energies to this interesting but greatly neglected field of research.

Ceratopogon varicolor, n. sp.

♀.—Head black, eyes quite widely separated on the front, antennæ brown, the basal joint and sutures of the small ones yellowish, mouth parts brown; thorax black, opaque, gray pruinose, mesonotum in middle of the front half marked with a pair of brown vittæ, scutellum brownish yellow, abdomen pale yellow, dorsum of first segment brownish; legs yellow, coxæ, a band before apices of front and middle femora, near base of front and hind tibiæ, and the hind femora, except the extreme bases, black, narrow apices of tibiæ and joints of tarsi also black; first hind tarsal joint about twice as long as the second, the fifth about twice as long as the fourth, not spinose on under side, claws large and of an equal size, each front femur bearing four stout spines on the apical half of the under side, other femora without spines; wings hyaline, bare, third vein separated from the first, not connected with it by a crossvein, ending near four-fifths length of wing, fourth vein forks slightly before small crossvein; halteres yellow; length, 3 mm.

A female specimen bred September 4 by Dr. H. G. Dyar. Type, Cat. No. 6083, U. S. National Museum.

Hab.—Bellport, Long Island, N. Y.

Near *setulosus* Loew, but differing in the coloring of the legs, the absence of black bristles on the hind tibia, etc.

Tanypus dyari, n. sp.

♂♀.—Yellowish brown, the scutellum, abdomen, halteres and legs pale yellowish, the abdomen changing into yellowish brown toward the apex and with a similarly colored band on the preceding segments except the first, a brownish band before apex of each femur and near base of each femur and near base of each tibia; antennal plumosity of male brown mixed with whitish and changing into white at the apex; mesonotum opaque, grayish pruinose, the three vittæ indistinct, yellowish brown; abdominal segments 2 to 6 bearing near the base a dorsal cluster of rather long brown hairs; front tibiæ only pubescent, their tarsi bearing a few rather long hairs, middle and hind tibiæ densely covered with such hairs; wings densely haired, hyaline, a median band and the apical third brownish and marked with several hyaline spots; median band very irregular, greatly contracted at the middle and expanded at each end, the median crossvein about at its middle and clouded with a darker brown, the hyaline spots principally situated near the hind margin of the wing; brown at apex of wing contains about 8 hyaline spots and dots; fifth vein forks slightly before the crossvein; length, 3 to 4 mm. Five males and eight females.

Type, No. 6084, U. S. National Museum.

Hab.—Washington, D.C. (D. W. Coquillett, in May); Bellport, Long Island, N. Y. (H. G. Dyar, bred August 27th and 28th); Cambridge, Mass. (Edward Burgess, April 4th); and Detroit, Mich. (H. G. Hubbard).

Corethra brakeleyi, n. sp.

♂♀.—Dark brown, the antennæ, halteres, knees and tarsi yellow; plumosity of male antennæ yellow, mesonotum opaque, gray pruinose except three narrow vittæ and a few spots near the humeri, hairs of thorax brownish, those of the abdomen yellow, tibiæ and tarsi bearing many long hairs; first joint of front tarsi slightly shorter than the tibia; wings whitish hyaline, marked with a brown crossband near one-third and two-thirds its length, the first one oblique, the second band produced triangularly near middle of its inner side, costal margin on each side of this band strongly tinged with golden yellow, fringe white, marked with a brown spot at posterior end of each crossband and on either side of the extreme wing tip; length, 1.5 mm.

One male and three females, bred jointly, August 12th to 14th, by Mr. J. T. Brakely and Prof. J. P. Smith. Type, Cat. No. 6086, U. S. National Museum.

Hab.—Lahaway, N. J.

A New Species of Brachynemurus.

By Nathan Banks.

In a small collection of Neuroptera recently sent me for determination by Prof. Cockerell, I find a species of ant-lion fly not hitherto described. It belongs to the large genus, *Brachynemurus*, and is allied to our common *B. abdominalis* Say.

Brachynemurus cockerelli n. sp.—Face yellow; a large dark brown spot around and between the antennæ, lower each side, but with a faint median line toward the clypeus; vertex yellow, with a brown line each side; antennæ brown, moderately long; palpi yellow, last joint partly brown. Prothorax pale yellow, with four narrow brown lines from base to tip, all of equal width and at equal distances apart; rest of thorax mostly brown, with yellow spots and lines, two small spots on each anterior lobe of the mesothorax, metathorax pale in the middle; pleura brown, with yellow spots most numerous on the posterior part of metathorax. Legs pale yellow, dotted with black, quite thickly above on hind and middle femora; tips of tarsal joints brown; legs with many black bristles, and some white ones on the femora; spurs as long as the first two tarsal joints. Abdomen yellow, striped with brown, venter mostly brown; above each segment has a median and a lateral stripe, leaving considerable yellow between them; the abdomen is clothed with many black and a few white hairs; in the ♀ with the third segment nearly twice as long as the fourth. Wings faintly flavescent; all the longitudinal veins interruptedly brown and white, many cross-veins brown at bases; no brown on the membrane save a small brown dot at the end of the median in fore wings; pterostigma yellowish, small and not prominent; wings moderately narrow, hind ones acute at tips; four cross-veins before origin of the radial sector in fore wings, between anal and cubital veins but one series of cells, few of the costals forked before pterostigma, in fore wing the cubital forks directly below the first fork of the radial sector. Length 31 mm., expanse 62 mm.

One female from Lone Mountain, New Mexico, July (Cockerell). Easily separated from *B. abdominalis* by the four lines on prothorax, by the dotted median vein in fore wings, and by the lack of spots on the membrane. From *B. hubbardi* it is distinct by the yellow color, markings of head, etc.

Mr. S. N. Dunning, of Hartford, Conn., has presented his valuable collection of Hymenoptera to the American Entomological Society. It includes a number of Mr. Dunning's types in this order of insects.

A New Species of Cratichneumon.

By Henry L. Viereck.

Cratichneumon artemis n. sp.—♀.—Length 9.5 mm.—Head and thorax black, abdomen bluish, femora and tibiæ fulvous. Clypeus truncate, polished, with a few punctures posteriorly, the rest of the head polished, sparsely punctured, the cheeks especially so. Ocelli in a low triangle, the space between posterior ones greater than that between them and nearest eye margin; first joint of flagellum distinctly longer than the second, scape globose, punctured. Prothorax strongly incurved, the superior half longitudinally striate. Dorsulum with separated punctures, parapsidal grooves not extending to the middle. Scutellum convex, punctures deep and well separated. Mesopleura separately and deeply punctured anteriorly, posteriorly closer and somewhat striate. Areolæ of metanotum not strongly defined, they are minutely roughened, lateral superior margins of metathorax rather strongly margined, the rest of of metathorax confluently punctured; posterior coxæ closely, strongly punctured. Post-petiole indistinctly striate, becoming sparsely punctured posteriorly; the second dorsal abdominal segment closely and deeply punctured, the following segments less so, the apical ones almost impunctate. Head and thorax sparsely pubescent, abdomen apparently bare dorsally, indistinctly pubescent ventrally.

Black; Mandibles, except apex and base, all of four anterior legs, except coxæ and trochanters, and posterior femora and tibiæ fulvous, like legs of *C. pedalis;* tarsi of posterior legs less brown, abdomen ventrally testaceous, dorsally purplish to bluish; wings subhyaline, nervures and stigma dark brown.

Type Coll. Am. Ent. Soc.

Type locality, Colorado.—One female.

Cratichneumon pedalis pallidipennis n. var.—♀ ♂, Length 8 mm. Differs from the typical form in the subhyaline not deeply fuscous wings, and usually paler legs.

Type Coll. Am. Ent. Soc.

Type locality, Colorado.—Four females, four males, one specimen from Nevada.

Cratichneneumon pedalis varitarsis n. var.—♂, Length 11.5 mm. Distinguished by the uniformly black antennæ, the darker wings, and by the posterior tibiæ and tarsi being almost entirely black.

Type Coll. Am. Ent. Soc.

Type locality, Colorado.—Six female specimens.

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfully receive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and, as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for a certain issue. Twenty-five "extras," without change in form, will be given free, when they are wanted; and this should be so stated on the MS., along with the number desired. The receipt of all papers will be acknowledged.—ED.

PHILADELPHIA, PA., MARCH, 1902.

From time to time questions of nomenclature arise in entomology about which there is considerable diversity of opinion, and it is thought by some that entomologists should adopt an authoritative code which all might follow. There is also difference of opinion as to the advisability of considering one or more specimens as types. This question is easier to decide than some of the nomenclatural ones, as the logical deduction appears to be that there should be but one type. It is no uncommon thing to find two good species among a number of specimens all labelled type. We have already advocated a national association of entomologists which should be made up of State associations. To accomplish this it will be necessary for some one person to take interest in the matter and get others interested. When this is done the decision on such questions could be left to the national association.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

I WISH to report the capture of specimens of *Lestes uncatus* Kirby. 2 ♂♂ June 2d and 3d, Nevada, Iowa. 1 ♂, 1 ♀, June 3d, Maxwell, Ia. The specimens from Maxwell were taken on grass along small creek. The specimens from Nevada I know nothing of as they were taken by another

party, and no data given. From Prof. Elrod's list, ENT. NEWS, January, 1898, you will note this as new to Iowa.

I wish to thank Dr. Calvert for identifying and pointing out these facts. —M. E. HOAG.

ASPIDIOTUS HEDERÆ IN AUSTRALIA.—Mr. James Lidgett was in too much of a hurry when he wrote his article (p. 43) on this subject, or he would have noticed:

(1.) That *A. hederæ* is the same as *A. nerii*, which has long been known from various localities in Australia (see Maskell, Trans. N. Z. Inst., xxvii, p. 4.)

(2.) That the synonyms of *A. hederæ* in the Suppl. to Check-List of Coccidæ are on the authority of Berlese and Leonardi, as is stated in a footnote. Moreover, I add, "The names cited as synonymous doubtless represent at least several good varieties."

(3.) That Pandelon is a place, and not a plant.—T. D. A. COCKERELL.

MRS. C. E. GRESHAM, of Lynn, Mass., sends us the following account of an observation made by her deceased father, Alfred F. Chatfield. "A pebble brought out of a hole by an ant in an ant hill, weighed one-half a carat or two grains. Nine of the ants from the hill weighed only one-half a grain. Thus it is shown that one ant can lift thirty-six times its own weight."

ORNEODES HEXADACTYLA, LINN.—On April 23, 1900, I took a single specimen of this species at this place. Prof. C. H. Fernald, in his "Pterophoridæ of North America," says that this species occurs in the western part of this country, and gives as its habitat Europe, Missouri, California, Oregon, Canada, Manitoba. Has it been taken before so far east?—C. O. HOUGHTON, Ithaca, N. Y.

SCHISTOCERCA ALUTACEA AND RUBIGINOSA.—On September 2, 1901, while collecting between Atsion and Quaker Bridge, Burlington County, New Jersey, the writer secured specimens of *Schistocerca alutacea* and *rubiginosa*. The most interesting thing in connection with the captures was the finding of one sex of one form paired with the opposite sex of the other form. This evidence, together with the close relationship of the forms, leads one to question the absolute distinctness of the two. Specimens in the collection of the Academy of Natural Sciences of Philadelphia, taken on the above-mentioned date, are perfectly typical of the two forms, and the two would be flushed from the same bush, but others are an apparently intermediate phase, in which the dorsal stripe does not extend beyond the tip of the pronotum to any marked degree. The last-mentioned specimens would possibly be considered representative of the brown phase of *S. alutacea*, but the whole matter seems deserving of more attention, as apparently too much stress has been laid on variable or uncertain color characters.—JAMES A. G. REHN.

MYSTERIOUS TITLES.—"I understand, Mrs. Grassey, that your son has become quite an eminent lepidopterist."

"Mercy on us! It ain't nothing like a kleptomaniac, is it?"

LAKE LABORATORY, of the Ohio University, located at Sandusky, on Lake Erie. Six weeks' instruction in a field and laboratory course in entomology will be given, including instruction in collecting, mounting and identifying, in connection with studies on life history and anatomy. Course begins July 7th. For particulars, apply to Prof. Herbert Osborn, Ohio State University, Columbus.

CURIOUS HABITS OF CERTAIN HYMENOPTERA.—In the fall of 1901, I received from Mr. F. S. Daggett, Pasadena, Cal., a lot of Hymenoptera, collected under rather peculiar circumstances, which are worthy of note and of biological importance. The lot received consisted of *Pompilus ferrugineus*, *Odynerus sulphureus* and *Chalybion coeruleum*, collected while in quest of Coleoptera and Lepidoptera, Mr. Daggett's specialty, he kindly remembering me by collecting these purposely for me. A peculiarity of these flies aroused my interest, and, asking Mr. Daggett for further particulars, he kindly furnished me with the following notes:

In stopping at a water-trough [Los Angeles Co., Calif.], these insects did not come in a regular line of flight, but came pretty steadily. I was at the water-trough about three-fourths of an hour when I commenced to pick them up with the forceps. There were about fifty, and about the same number left when I quit. Three-fourths of them alighted on the surface of the water with legs outstretched, just the same as the "skaters" do, leaving little depressions about each foot. Little puffs of wind would reach the surface, when the flies would be swept six to eight inches, sometimes sideways, on the surface. In picking them up with the forceps, some would be knocked under water; they at once paddled away like flies, and had no difficulty in reaching the sides and crawling out. The metallic blue *Chalybion* did not alight on the water, but on the edge or sides, working down with short, jerky movements. All the others except *Chalybion* rested on the water, and came in about even numbers; the large, darker ones (*Pompilus*) were more alert and harder to pick up than their companions of a more yellow cast (*Odynerus*.) The honey bees gathered in clusters about the dripping pipe, but did not alight on the water. The weather was extremely hot (106°), and a hot, but not very strong, wind blew up the dry wash. It was at noon when we stopped to feed our horses, and there was no other water for several miles. There were a few flowers of desert-like growth, bnt nothing that these insects were working on.

In collecting and observing Hymenoptera under various conditions and situations for a number of years, I have never seen or heard of a like occurrence, and would like to know if any similar actions of Hymenoptera have been observed by some one else.—R. J. WEITH, Elkhart, Ind.

5-24 1899

PROF. H. OSBORN Dersir

I take the privalige to write to you for to se if I can get any infermation as to how to destroy aunts I hav a lot in the cemetry that they are on that I hav tried coaloil on Tortentine but to no purpos and hav tried pound the surface with a beatle and that only set them to work moar they are working in a great many places in the cemetry I thought perhaps you might give us som plan to destroy shem
pleas answer as soon as convenient
Yours truly ——— ———

I presume every entomologist, especially every one who has had the privilege of serving on a station staff, has had enough experience to become hardened to the amusing efforts of some of their correspondents. However, here is one that may bring a smile and I reproduce it *verbatim et literatim*, all except the chirography which needs zinc etching to do it justice.—HERBERT OSBORN.

Entomological Literature.

COMPILED BY HENRY L. VIERECK AND JAMES A. G. REHN.

Under the above head it is intended to note such papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology, unless monographs, will not be noted. Contributions to the anatomy, physiology and embryology of insects, however, whether relating to American or exotic species, will be recorded. The numbers in heavy-faced type refer to the journals, as numbered in the following list, in which the papers are published; * denotes that the paper in question contains descriptions of new North American forms. The titles of all papers will be quoted in the original and not translated.

2. Transactions of the American Entomological Society, Philadelphia. —**4.** The Canadian Entomologist, London, Ontario.—**5.** Psyche, Cambridge, Mass —**11.** The Annals and Magazine of Natural History, London. —**15.** Biologia Centrali Americana, London.—**22.** Zoologischer Anzeiger, Leipsic.—**32.** Bulletin du Museum d'Histoire Naturelle, Paris.—**33.** Sitzzungsberichte der Kaiserlichen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Classe, Vienna —**35.** Annales, Societe Entomologique de Belgique, Brussels.—**44.** Verhandlungen der K. K. Zoologische-Botanische Gesellschaft, Vienna.—**143.** Ohio State University Naturalist, Columbus.—**156.** Zeitschrift für systematische Hymenopterologie und Dipterologie, Teschendorf.

THE GENERAL SUBJECT.—Anon. Les Entomologistes à Montreal. Le Naturaliste Canadien, Chicoutimi, xxix, Jan., '02.—**Brauer, F.** Ueber die von Prof. O. Simony auf den Canaren gefundenen Neuroptera und Pseudoneuroptera (Odonata, Corrodentia et Ephemeridæ), **33,** ix Band, vii Heft, 1900.—**Iches, L.** Les Insects des violettes, La Nature, Paris, xxx, Jan. 25, '02.—**Möbius, K.** Einleitung zu einer Besprechung über den Artbegriff. Gesellschaft Nafurforschender Freunde zu Berlin, Dec., '01.—

Pilcher, J. G. On methods used to preserve color in relaxing entomological specimens. The Entomologist, London, Feb., '02.—**Rossi, G.** Blumen und Insekten. Insekten Börse, Leipsic, Jan., '02.

ECONOMIC ENTOMOLOGY.—Alwood, W. B. San Jose Scale and the Administration of the Crop Pest Laws of Virginia. Third Report of the State Entomologist and Pathologist. Richmond. 1900-01.—**Compere, G.** Some Results of the Introduction of Parasites and Predaceous Insects into California. The Agricultural Journal, Cape Town. xx, No. 1.—**Lavergne, G.** La Filoxera (concl.). Revista Chilena, Santiago, Dec., '01.—**Sanderson, E. D.** Three orchard pests. I. The apple bud borer. II. The fruit-tree bark-borer. III. The periodical cicada. Bulletin 53, Delaware College, Agric. Expm't Station, Newark, Del., Dec., 1901.—**Weed, C. M.** Remedies for the Canker-worm. Bull. 85, New Hampshire College, Agric. Expm't Station, Durham, Oct., 1901.—**Zimmerman, A.** Sammelreferate über die tierischen und pflanzlichen Parasiten der Tropischen Kulturpflanzen III. Die Parasiten des Thees. Centralb. für Bact. Paras. u. Inf., Jena, xxxi, 1, Jan., '02.

ARACHNIDA.—Cambridge, F. O. P. A Revision of the Genera of the Araneæ or Spiders with reference to their Type Species, **11,** 7th ser., ix, Jan., 1902.—Arachnida Araneidea (Mexico and Central America), **15,** Arachnida Araneidea, portions of vol. I and II.—**Dahl, F.** Die Seltenheit gewisser Spinnen arten. Gesell. Natur. f. Freunde zu Berlin, Dec, '01.—**Hansen, H. J.** On Six Species of *Koenenia*, with remarks on the order Palpigradi.* Entomologische Tidschrift., xxii, häft 4, Stockholm.—**Kraepelin, K.** Catalogue des Scorpions des collections du Museum d'Histoire Naturelle de Paris. Catalogue des Pedipalpes des collections du Museum d'Histoire Naturelle de Paris, **32.—Rydall, E. H.** Tarantula hunting. Popular Science News, New York, Jan. '02.—**Tragardh.** Revision der von Thorell aus Grönland Spitzbergen und der Bären Insel und von L. Koch aus Sibirien und Novaja Semlja beschriebenen Acariden, **22,** xxv, Band 30, Dec., '01.—**Wasman, E.** Zur Kenntniss der myrmecophiler, Antennophorus und anderer auf Ameisen und Termiten reitender Acarinen, **22,** Jan., '02.

MYRIOPODA.—Morse, M. Myriopods from Vinton, Ohio, **143,** Jan., '02.

COLLEMBOLA.—Lecaillon, A. Recherches sur l'ovaire des Collemboles (Pl. xiii a xvi.) Archives d'Anatomie Microscopique, Paris, 1901.

EPHEMERIDA.—Brauer, F. Ephemeridæ of the Canaries. See general subject.

ODONATA.—Brauer, F. Odonata of the Canaries. See general subject.—**Needham, J. G., and Hart, C. A.** The Dragon-flies (*Odonata*) of Illinois, Part I. *Petaluridæ*, *Aeschnidæ*, and *Gomphidæ*. Bull. Ill. State Labor. Nat. Hist., vol. vi., Sept., 1901.

CORRODENTIA.—Brauer, F. Corrodentia of the Canaries. See General Subject.

MALLOPHAGA.—Osborn, H. Mallophagan records and descriptions,* **143,** Jan., '02.

ORTHOPTERA.—Giardina Andrea. Funzionamento dell' armatura genitale femminile e considerazioni intorno alle ooteche degli Acridii. Giornale di Scienze Naturali ed Economiche. Palermo, 1901.—**Morse, A. P.,** and **Bruner, L.** Orthoptera (Mexico and Central America), **15,** Orthoptera, vol. ii. (portion).—**Scudder, S. H.** On the United States Orthoptera which have been referred to the genus *Tridactylus*, **5,** Feb., '02.

HEMIPTERA.—Cockerell, T. D. A. New Genera and Species of Coccidæ, with Notes on known Species,* **11,** 7th ser., ix, Jan. 1902.—**Distant, W. L.** Rhynchotal Notes—xii. Heteroptera: Fam. Pyrrhocoridæ, **11,** 7th ser., ix, Jan., 1902.—**Hunter, S. J.** Coccidæ of Kansas, iv. The Kansas Univ. Quarterly, Lawrence, July, '01.—**Martin, J., Coutiere, H.** Sur un nouvel Hemiptere halophile (*Hermatobatoides marchei*, n. g. n. sp.), **32,** 1901.

NEUROPTERA.—Brauer, F. Neuroptera and Pseudoneuroptera of the Canaries. See General Subject.—**Hine, J. S.** Notes on Neuropteroid insects, **143,** Jan., '02.

LEPIDOPTERA.—Bachmetjew, P. Ein neu-entdecktes Schutzmittel bei Schmetterlings-puppen gegen Kälte. Societas Entomologica, Zürich-Hottingen, Feb, '02.—**Dyar, H. G.** Life histories of North American Geometridæ, xxx. **5,** Feb., '02. The United States National Museum (Lepidoptera), **4,** Feb., '02.—**Gibson, A.** Additional notes on the life-history of *Arctia phalerata*, **4.**—**Godman, F. D.,** and **Salvin, O.** Lepidoptera Rhopalocera (Mexico and Central America), **15,** Lepidoptera Rhopalocera, portions of vols. i, ii and iii.—**Grote, R.** Fossile Schmetterlinge und der Schmetterlingsflügel, **44,** Dec., '01.—**Heath, E. F.** Notes on the Lepidoptera of 1901 in Southern Manitoba, **4.**—**Lyman, H. H.** A correction, **4,** Feb., '02.—**Packard, A. S.** A preliminary sketch of the Sphingicampidæ, a new group of Protosphingine Lepidoptera, with its subdivisions, i, **5.**—**Smith, J. B.** Three new Noctuids from British North America,* **4,** Feb., '02. *Hydroecia Americana*, Speyer, or *Hydroecia Atlantica*, Smith, **4,** Feb., '02.—**Tallant, W. N.** *Ancæa andria* in Indiana, **4.**

DIPTERA.—Bischof, J. Einige neue Gattungen von Musciden, **33,** ix Band, vii Heft. 1900.—**Grænicher, S.** Flowers adapted to Flesh-Flies. Bulletin of the Wisconsin Nat. Hist. Society, ii, No. 1, Milwaukee.—**Stein, P.** Die Walker'schen ausser Europäischen Anthomyiden in der Sammlung des British Museum zu London, **156,** i, July, '01.

COLEOPTERA.—Arrow, G. J. The genus Hyliota of the Coleopterous family Cucujidæ, with descriptions of new forms and a list of the described species, **36,** part iv, Dec., 1901.—**Belon, R. P.** Descriptions de trois Longicornes bresiliens du genre *Ectenessa* Bates, **35,** Jan., '02.—**Blandford, W. F. H.** Coleoptera (Mexico and Central America), **15,** Coleoptera, vol. iv, part 6.—**Champion, G. C.** Sexual dimorphism in *Buprestis sanguinea* Fabr., a species occurring in Spain, and new to the European list, **36,** part iv, Dec., 1901.—**Fall, H. C.** Some Insects of the Hudsonian zone in New Mexico, vii, Coleoptera, **5,** Feb., '02.—**Hayward, R. A.** A note on the secondary sexual characters of *Omophron*, **5,** Feb. '02.—**Kolbe, H. J.** Vergleichend-morphologische Untersuchungen an Coleopteren nebst

Grundlagen zu einem System und zur Systematik derselben. Archiv für Naturgeschichte, '01.—**Luze, G.** *Bolitobuni.* Revision der Paläarktischen Arten der Staphyliniden Gattungen *Bryocharis* Boisd. et Lac. *Bolitobius* Mannh., *Bryoporus* Kraatz und *Mysetoporus* Mannh. **44,** Dec., '01.—**Pic, M.** Contribution a l'etude des Xyletini du Bresil, **35,** Jan., '02.—Description de Coléoptères Brésiliens nouveaux. Le Naturaliste, Paris, xxiv.—**Reitter, Ed.** Bestimmungs-tabelle das Europaischen Coleopteren. (Carabidæ Abth. Harpalini) Verhandlungen naturforschenden Vereins in Brünn, xxxviii. Band. Brünn, '00.

HYMENOPTERA.—Andre, Ern. Descriptions des quelques especes et varietes nouvelles des Mutilles d'Amerique, **156,** i, Sept., '1.—**Bradley, J. C.** The North American *Oryssidæ*, **2,** xxvii, Jan., '02.—The *Evaniidæ* of America North of Mexico*, **2,** xxvii, Jan., '02.—**Cockerell, T. D. A.** A new bee from California,* **156,** i. New bees of the genus *Andrena* from Wisconsin,* **4,** Feb., '02.—**Dickel.** Ueber die Entwicklungsweise der honigbiene, **22,** xxv, Band. 30, Dec., '01.—**Ducke, A.** Beiträge zur Kenntnis der geographischen Verbreitung der Chrysididen und Beschreibung von drei neuen Arten, **156,** Nov., '01.—**Felt, E. P.** Two new species of *Ophion*, **5,** Feb., '02 —**Friese, H.** Neue Arten der Bienengattung *Trigona* Jur., **156,** i, Sept., '01.—**Krieger, R.** Bemerkung zur Nomenklatur des Geæders des Hinterflügels der Ichneumoniden, **156,** i, July, '01.—**Robertson, C.** Some new or little-known bees, ii,* **4,** Feb., '02.—**Titus, E. S. G.** Colorado Bombidæ, **4**, Feb., '02.

A most interesting orthopterological contribution, written by J. Portschinsky in Russian, and translated by J. Kotinsky into English, appears in the *Entomologists' Record* for 1901, xiii, pp. 210–213, 240–243, 259–261. One new species, *Eremobia grandis*, is described, and a little known species, *Nocarodes cyanipes*, treated of in some detail. But the most interesting feature of the paper is the able discussion of the origin of sound-producing organs in the ACRIDIDÆ, and of the adaptation of color in protective resemblance and sexual selection. This portion of the article should prove interesting reading for any one, scientific or not. A short description of the fields about Erivan and Echmiadzin, in Transcaucasia, the home of *Eremobia grandis*, is given and the botanical features noted.—A. N. CAUDELL, Washington, D. C.

Doings of Societies.

At the January meeting of the Feldman Collecting Social, thirteen persons were present. A letter from the President was read stating that on account of illness he could not be present and would read his annual address at the February meeting.

Dr. VanDyke, of San Francisco, Cal., in comparing the Eastern and Western collections of insects, said there are quite a number of species in the Western collections which were not determined correctly and there are also a great many undetermined species which have never been seen East, while the collections in the East are more correctly determined. He spoke about the number of distinct faunas which are found in California and described the forms found in them. He stated that *Omus* went around at night, and during the day would be found under stones or logs and were very swift in their movements. *Cychrus*, as a rule, are only found along water courses.

Mr. Seiss exhibited two species of Blattidæ, collected by Mr. Laurent. One species was *Phyllodromia cubensis*, collected at Miami, Florida. This is the first record of this species (which is Cuban) being found in the United States. The other species was *Nyctibora sericea* taken at Philadelphia. This is the second record of the species being found, the first coming from Massachusetts.

Mr. Laurent exhibited the species of Coleoptera taken in the dried fruit of Yucca in Florida. He thought some of them were new. He also showed the larva of *Lagochirus araneiformis*, which is a rare Cerambycid, taken at Miami, Florida.

Mr. Daecke exhibited a specimen of the male of *Spilochalcis delira* taken at Anglesea, N. J., September 26th. Three females were known before, but this is the first record of the male. It was a parasite on *Dichelia sulfuriana*. The speaker also stated that he had tried to raise a specimen of *Tenodera sinensis*. The insect hatched in June and the first moult took place between the 12th and 14th, the 2nd on June 21st, the third on June 27th, the fourth July 3rd, the fifth July 10th, and the sixth July 26th, and died at this time. It started to eat house flies immediately after the 3rd moult.

Mr. Daecke also exhibited a specimen of *Mutilla montivaga* taken at Little Falls, N. J., September 4th, as a record new to New Jersey.

Mr. Bird, of Rye, N. Y., exhibited a series of the adults and larvæ of the genus Hydrœcia which he had taken around his

district and raised. He spoke upon their life habits and food plants.

The following officers were elected to serve for the year 1902: President, Mr. Charles W. Johnson; Vice President, Mr. Charles Boerner; Treasurer, Mr. H. W. Wenzel; Secretary, Mr. Wm. J. Fox.

W. R. REINICK, *Secretary.*

A meeting of the Entomological Section of the Academy of Natural Sciences was held January 23d, with Mr. H. W. Wenzel, Vice Director, presiding. Fifteen persons were present, including Mr. Denton, of Massachusetts, and Dr. Van Dyke, of California. Dr. Van Dyke said he noticed that the entomologists of the East have not adopted any general plan for their government in regard to types and co-types and nomenclature. He thought some movement toward an authoritative method should be arranged. He also spoke of the value of exact data in use at the present time. The value of the knowledge of distribution and biological studies was dwelt on. Mr. Vierick said he thought the one-type method should be adopted. Mr. Rehn stated that the Novitates Zoologicæ attempted to form a code with the term variety omitted. He considered this term a rather plastic one. The speaker also described the procedure of the American Ornithologists' Union in regard to questions of nomenclature. Mr. Rehn exhibited pictures of the barren plains of Ocean and Burlington Counties, New Jersey. These plains cover an area of six thousand and seven thousand acres respectively, divided by the Wading river. They are covered by stunted pines and oakes. Fire may have something to do with the curious conditions found. The distribution of the animals and plants of the region was mentioned. Mr. Wenzel said that in certain districts in South Jersey this coleopterological fauna was typically Southern in character. Dr. Skinner exhibited specimens of *Lycæna neurona* and *chlorina* recently described. Mr. Rehn read a report on the Hymenoptera collected by Dr. Skinner in New Mexico. There were about forty species new to science.

HENRY SKINNER, *Recorder.*

EXCHANGES.

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Wanted.—January number of Vol, ix. 1898, Entomological News.—A Stewart, Librarian, West Virginia Agric. Exper. Station, Morgantown, W. Va.

Lepidoptera.—Exchange desired with collectors from all parts of the United States and Canada. Especially for mounted specimens. Correspondence solicited in both English and German.—A. Kwiat, 701 Larrabee St., Chicago, Ill.

Wanted.—Complete sets, Insect Life; Psyche; Riley's Missouri Reports; also Entomological Magazines, Bulletins or books not in my library. Send lists with lowest cash price, or will give good exchange in native and exotic Lepidoptera.—W. D. Kearfott, 91 Liberty Street, New York City.

Lepidoptera Wanted.—Collectors in all parts of the world. Cash for Disiderata. Correspondence in French, German and Spanish.—M. E. Hoag, Maxwell, Iowa.

Coleoptera.—*Saperda* wanted, named or unamed. Especially from the Western States. Will give good exchange or pay cash. Also ask the loan of material in this genus for study —L. H. Joutel, 164 E. 117th St., New York.

I have bred specimens of *Saperda puncticollis, concolor, lateralis* and *discoidea; Elasmocerus terminatus; Ichnea laticornis; Melasis pectinicornis; Fornax orchesides*, etc. Want *Saperda cretata* and *tridentata* and other Cerambycidæ and Cleridæ.—L. H. Joutel, 164 E. 117th St., N. Y.

Desires Papilionidæ, Cicindelidæ, Cycrini and Cetonidæ of the world, either by purchase or exchange.—Geo. A. Ehrmann, 2314 Sarrh Street, Pittsburgh, Pa.

Wanted.—Perlidæ and the immature stages of aquatic insects generally. I will make determinations where possible, and give exchanges, when desired.—James G. Needham, Lake Forest, Ill.

Cash or good exchange given for no. 3. vol. ii. and no. 1, vol. iii, of Papilio, and vols. i, ii and iii of Bulletin Brooklyn Ent. Soc.—H. H. Newcomb, 35 Court Street, Boston. Mass.

Lepidoptera —*Catocala badia. praeclara*, etc.; also other Noctuids in exchange for specimens new to me.—Geo. Kircher, 573 Germania Avenue, Jersey City Heights, N. J.

Lepidoptera.—Exchange desired with collectors in any State. Please send lists.—John & Hurd Comstock, 1572 Ridge Ave., Evanston, Ill.

Wanted for cash or exchange, Pupæ of the foll: Sphinges; *T. modesta; S. ermitus, lucitiosa; Kalmiæ; D. hylæus; C. juglandis; A. versicolor; A. nessus; Thy abbotii.* Address with prices.—Henry Engel P. O. Box 369, Pittsburg, Pa.

Lepidoptera of United States and Europe to exchange for other North American specimens not in my collection. Correspondence in English and German.—Charles Schlieter, 601 Christiana Ave., Chicago, Ill.

Wanted.—Microlepidoptera, especially Tineina of the United States. Will either buy or give exchanges. Desire to open correspondence with collectors of these groups and will determine material.—W. G. Dietz, 21 N. Vine Street, Hazelton, Pa.

Exchange.—200 Chrysalids; *Papilio Ajax;* 80 Chrysalids; *Papilo turnus.* Live Pupas of *Myrones* and Cocoons of *Promethus.* Will take Exotic flies, Western bird skins and humming birds' nests.—W. H Valway, 2671 Broadway, Cleveland, Ohio.

Wanted live Pupæ, also Lepidoptera, Coleoptera. Will give European and Exotic species in exchange.—Arnold Voelschow, Schwerin Meckl., Germany.

Lepidoptera for exchange from United States, Europe, South America and East India for specimens new to my collection.—A. Troschel, 446 Larchmont Ave., Chicago.

Wanted.—Hymenoptera, especially ants and wasps from the Southern and Western States and American Termites, and any entomological publications.—Canisius College Museum (H. Wolff, S. J.), Buffalo, N. Y.

Exchange.—*Cicindela puritana* for any Cicindelidæ new to my collection. Will exchange also N. American or European Coleoptera. Send for lists. Correspondence in English and French.—C. Crozet, New Park Ave., Hartford, Conn.

Diptera.—Wanted, as many Asilina as possible from all parts of North America —Write for particulars to Prof. C. H. Fernald, Amherst, Mass.

Lepidoptera —*Argynnis nitocris* var. *nigrocærulea* Ckll., for exchange. Also many other rare butterflies.—Henry Skinner, Acad. Nat. Sciences, 1900 Race Street, Philadelphia.

Exchange.—British Columbia Lepidoptera. Only North American species wanted. Send lists.—Ernest M. Anderson, 64 Superior Street, Victoria, B. C.

Lepidoptera —I wish to purchase Lepidoptera of North America, especially *Noctuidæ* —Edouard Brabant, Morenchies Par. Cambria (Nord), France.

Exchange.—Will collect Scydmænidæ and Pselaphidæ in exchange for papers on the families of Scydmænidæ, Pselaphidæ and Staphylinidæ. —August Schmidt, 1836 E. Atlantic St., Philadelphia.

Lepidoptera.—I would like to correspond and exchange with some new beginners.—Charles L. Heink, 4320 North Eleventh St., St. Louis, Mo.

Lepidoptera.—I can give in exchange Lepidoptera (in papers) of the world, correctly named, for Lepidoptera from North and South America, and Canada (in papers), correctly named. Please to send exchange list to Wilhelm Neuburger, Berlin: S. Luisenufer 45.

Wanted.—Living larvæ, pupæ, fertile females or eggs of any of the North American *Callimorphæ* (genus *Haploa* Hüb.). Will exchange New Hampshire Lepidoptera.—F. H. Foster, Claremont, N. H.

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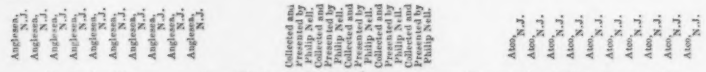

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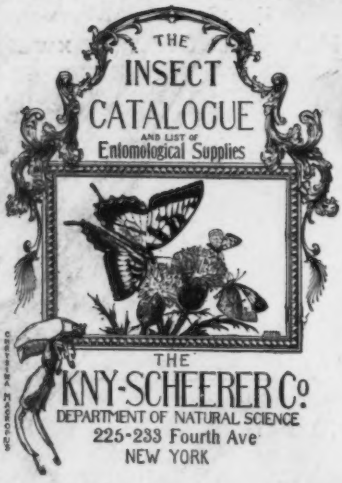

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